



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/509,023	11/29/2004	Toru Fujiki	2185-0735PUS1	3437
2292 7590 05/18/2007 BIRCH STEWART KOLASCH & BIRCH PO BOX 747 FALLS CHURCH, VA 22040-0747			EXAMINER PENG, KUO LIANG	
			ART UNIT 1712	PAPER NUMBER
			NOTIFICATION DATE 05/18/2007	DELIVERY MODE ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

mailroom@bskb.com

Office Action Summary

Application No.

10/509,023

Applicant(s)

FUJIKI ET AL.

Examiner

Kuo-Liang Peng

Art Unit

1712

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 9/27/04 Prel. Amendment.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-16 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-16 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date 4/14/06, 8/29/05, 9/27/04.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application
- 6) ☒ Other: See Continuation Sheet.

Continuation of Attachment(s) 6). Other: English translation of JP 2001-279032.

DETAILED ACTION

1. The Applicants' preliminary amendment filed September 27, 2004 is acknowledged. Claim 12 is amended. Now, Claims 1-16 are pending.

Claim Rejections - 35 USC § 112

2. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

3. Claims 14-16 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

In Claims 14-16 (line 1), the word "obtainable" is not a positive limitation, and does not constitute a limitation in any patentable sense. See *In re Hutchinson*, 33 CCPA 879, 154 F. 2d 135, 69 USPQ 138 (CCPA 1946). Applicants are advised to replace "obtainable" with -- obtained --.

Claim Rejections - 35 USC § 102

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

5. Claims 1-7 and 9-14 are rejected under 35 U.S.C. 102(b) as being anticipated by Kawate (US 6 051 652).

For Claims 1-5, 7 and 9-14, Kawate discloses a thermosetting resin composition comprising a) and b). (col. 2, lines 28-35 and col. 3, lines 8-19) A tackifier such as terpene-phenol resin, etc. can be used. (col. 6, lines 1-15) Component b) can be a terpolymer of glycidyl (meth)acrylate, ethylene and an alkyl (meth)acrylate, etc. (col. 3, line 57 to col. 4, line 4) The amounts of ethylene and glycidyl (meth)acrylate are described in col. 4, lines 5-14. An antioxidant can be present. (col. 6, lines 49-61) The composition can be used as an adhesive. An adhesive film can be obtained by extrusion and subsequently irradiated by e-beam. A laminate can be obtained. (col. 3, lines 20-28, col. 7, lines 29-67 and Examples) For Claim 6, the amount of the tackifier is exemplified in Table 1.

6. Claims 1-4, 6, 11-13 and 16 are rejected under 35 U.S.C. 102(b) as being anticipated by JP032 (JP 2001-279032).

For Claims 1-3, 6, 11-12 and 16, JP032 discloses a laminate derived from an adhesive film comprising an adhesive composition comprising A) a copolymer

derived from epoxy containing monomer and α -olefin; and B) a copolymer derived from terpene, isoprene, phenol, etc. ([0004]-[0009]) The amount of epoxy containing monomer in component A) can be exemplified in Examples. The weight ratio of A) to B) is described in [0004], [0010] and Examples. An antioxidant such as IRGANOX1076 can be used. (Examples) For Claim 4, vinyl acetate can be used in preparing component A). (Examples) For Claim 13, JP032 is silent on an adhesive film obtained by extrusion molding. However, the instant claim is a product-by-process claim. "Even though product-by-process claims are limited by and defined by the process, determination of patentability is based on the product itself. The patentability of a product does not depend on its method of production. If the product in the product-by-process claim is the same as or obvious from a product of the prior art, the claim is unpatentable even though the prior product was made by a different process" *In re Thorpe*, 777 F. 2d 695, 698, 227 USPQ 964, 966 (Fed. Cir. 1985).

7. Claim 8 is rejected under 35 U.S.C. 102(b) as being anticipated by JP032 as evidenced by Toh (US 5 977 276).

JP032 discloses an adhesive composition comprising an antioxidant of IRGANOX 1706, *supra*, which is incorporated herein by reference. Toh further teaches that IRGANOX 1706 is a phenolic antioxidant. (col. 12, lines 25-26)

8. Claims 1-6, 9, 11-13 and 16 are rejected under 35 U.S.C. 102(b) as being anticipated by Hammer (GB 1 567 375).

For Claims 1, 3-6, 9, 11-12 and 16, Hammer discloses a laminate comprising an adhesive film derived from an adhesive composition containing a phenolic resin novolac and an ethylene copolymer. The phenolic resin novolac can be obtained from **formaldehyde** and phenol such as **cresol**, etc. (page 1, line 68 to page 2, line 64 and page 5, lines 23-43) The ethylene copolymer can be obtained by copolymerizing ethylene, **glycidyl (meth)acrylate**, carbon monoxide (optional) and vinyl acetate with the monomer amounts described in page 1, line 68 to page 2, line 15, page 2, lines 66-88 and Table 1. The relative amounts of novolac and the ethylene copolymer are described in page 2, lines 16-36, page 5, lines 44-53 and Examples. A solvent can be used. (Examples) For Claim 2, Hammer is silent on the specific use of **formalin** for making the phenolic resin novolac. However, the instant claim is a product-by-process claim. "Even though product-by-process claims are limited by and defined by the process, determination of patentability is

based on the product itself. The patentability of a product does not depend on its method of production. If the product in the product-by-process claim is the same as or obvious from a product of the prior art, the claim is unpatentable even though the prior product was made by a different process” *In re Thorpe*, 777 F. 2d 695, 698, 227 USPQ 964, 966 (Fed. Cir. 1985). For Claim 13, Hammer is silent on an adhesive film obtained by extrusion molding. However, the instant claim is a product-by-process claim. “Even though product-by-process claims are limited by and defined by the process, determination of patentability is based on the product itself. The patentability of a product does not depend on its method of production. If the product in the product-by-process claim is the same as or obvious from a product of the prior art, the claim is unpatentable even though the prior product was made by a different process” *In re Thorpe*, 777 F. 2d 695, 698, 227 USPQ 964, 966 (Fed. Cir. 1985).

Claim Rejections - 35 USC § 103

9. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary

skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

10. Claim 15 is rejected under 35 U.S.C. 103(a) as being unpatentable over Kawate.

Kawate discloses an adhesive film derived from a thermosetting resin composition, *supra*, which is incorporated herein by reference. Kawate is silent on performing e-beam irradiation on the adhesive film plural times. However, number of times of e-beam irradiation will affect the extent of crosslinking of the film. In other words, the number of times of e-beam irradiation is a Result-Effective variable. Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention was made to irradiate the film with plural times through routine experimentation in order to afford a properly crosslinked film. Especially, Applicants do not show the criticality of performing irradiation plural times. See MPEP 2144.05 (II).

11. Claim 8 is rejected under 35 U.S.C. 103(a) as being unpatentable over Kawate in view of JP032 and Toh (US 5 977 276).

Kawate discloses an adhesive film derived from a thermosetting resin composition comprising an antioxidant, *supra*, which is incorporated herein by

Art Unit: 1712

reference. Kawate is silent on the claimed antioxidants. However, JP032 teaches the use of IRGANOX 1076 as an antioxidant in an adhesive film derived from materials similar to that of Kawate's. (Examples) Furthermore, Toh teaches that IRGANOX 1076 is a phenolic antioxidant. (col. 12, lines 25-26)

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention was made to utilize JP032's phenolic antioxidant in Kawate's adhesive film with expected success.

12. Claims 5 and 9-10 are rejected under 35 U.S.C. 103(a) as being unpatentable over JP032.

JP032 discloses an adhesive composition, *supra*, which is incorporated herein by reference.

For Claim 5, JP032 is silent on the claimed ethylene content in the copolymer. However, the ethylene content will affect the adhesion to the substrate because when ethylene content is higher, the content of glycidyl methacrylate will be lower, and the glycidyl methacrylate is the primary component in the copolymer to impart adhesion property. In other words, the ethylene content is a Result-Effective variable. Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention was made to utilize a copolymer having

whatever ethylene content through routine experimentation in order to afford a composition with desired adhesion properties. Especially, Applicants do not show the criticality of the ethylene content. See MPEP 2144.05 (II).

For Claims 9-10, JP032 is silent on the use of a solvent. However, JP032's composition is used as an adhesive in a laminate where the viscosity of the composition is important. As such, it would have been obvious to one of ordinary skill in the art at the time of the invention was made to incorporate a solvent in a proper amount in order to afford a composition with a desired viscosity with expected success.

13. Claims 14-15 are rejected under 35 U.S.C. 103(a) as being unpatentable over JP032 in view of Kawate.

JP032 discloses an adhesive composition, *supra*, which is incorporated herein by reference. JP032 is silent on irradiating the adhesive film. However, Kawate teaches an adhesive film (with a composition similar to that of JP032's) irradiated by e-beam. The motivation for e-beam irradiation is to properly crosslink the composition. (col. 3, lines 20-28, col. 7, lines 29-67 and Examples) As such, it would have been obvious to one of ordinary skill in the art at the time of the invention was made to irradiate JP032's adhesive film by e-beam with expected

success. Especially, Kawate is in the same field as JP032's endeavor. Furthermore, the number of times of e-beam irradiation will affect the extent of crosslinking of the film. In other words, the number of times of e-beam irradiation is a Result-Effective variable. Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention was made to irradiate the film with plural times through routine experimentation in order to afford a properly crosslinked film. Especially, Applicants do not show the criticality of performing irradiation plural times. See MPEP 2144.05 (II).

14. Claims 7-8 and 10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hammer in view of JP032 and Toh.

Hammer discloses an adhesive film derived from a thermosetting resin composition, *supra*, which is incorporated herein by reference.

For Claims 7-8, Hammer is silent on an antioxidants. However, JP032 teaches the use of IRGANOX 1076 as an antioxidant in an adhesive film derived from materials similar to that of Kawate's. (Examples) The motivation of using an antioxidant is to enhance the stability of the film. Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention was made to utilize JP032's phenolic antioxidant in Kawate's adhesive film with expected

success. Furthermore, Toh teaches that IRGANOX 1076 is a phenolic antioxidant.
(col. 12, lines 25-26)

For Claim 10, Hammer is silent on the amount of the solvent used. However, the solvent is used for dissolving the polymers. (e.g., Example 15) As such, the amount of the solvent is a Result-Effective variable. Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention was made to utilize whatever solvent amount through routine experimentation in order to properly dissolve the polymers. Especially, Applicants do not show the criticality of the solvent amount. See MPEP 2144.05 (II).

15. Claims 14-15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hammer in view of Kawate.

Hammer discloses an adhesive composition, *supra*, which is incorporated herein by reference. Hammer is silent on irradiating the adhesive film. However, Kawate teaches an adhesive film (with a composition similar to that of Hammer's) irradiated by e-beam. The motivation for e-beam irradiation is to properly crosslink the composition. (col. 3, lines 20-28, col. 7, lines 29-67 and Examples) As such, it would have been obvious to one of ordinary skill in the art at the time of the invention was made to irradiate Hammer's adhesive film by e-beam with expected

success. Furthermore, the number of times of e-beam irradiation will affect the extent of crosslinking of the film. In other words, the number of times of e-beam irradiation is a Result-Effective variable. Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention was made to irradiate the film with plural times through routine experimentation in order to afford a properly crosslinked film. Especially, Applicants do not show the criticality of performing irradiation plural times. See MPEP 2144.05 (II).

16. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Kuo-Liang Peng whose telephone number is (571) 272-1091. The examiner can normally be reached on Monday-Friday from 8:30 AM to 5:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Randy Gulakowski, can be reached on (571) 272-1302. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR.

Art Unit: 1712

Status information for unpublished applications is available through Private PAIR

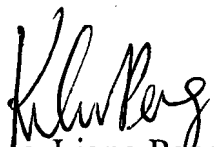
only. For more information about the PAIR system, see <http://pair->

direct.uspto.gov. Should you have questions on access to the Private PAIR system,

contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

klp

May 11, 2007


Kuo-Liang Peng
Primary Examiner
Art Unit 1712